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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,209	11/12/2003	Tieyu Zheng	30320/16220	5999

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EXAMINER	
SANGHAVI, HEMANG	
ART UNIT	**PAPER NUMBER**
2874	

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/706,209	ZHENG, TIEYU	
	Examiner	Art Unit	
	Hemang Sanghavi	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *25 and 26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24, 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on February 08, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 6,860,652 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Election/Restrictions

Applicant's election with traverse of Group I (Claims 1-18) in the reply filed on June 07, 2006 is acknowledged. The traversal is on the ground(s) that the Examiner failed to identify the different classifications of various claims and show substantial burden on the Examiner in accordance with MPEP 803. Applicant further argues that the Examiner had already examined all the claims in November 30, 2005 Office action and have also examined all claims in the parent case (now US Patent 6,860,652) without restriction which presumably shows no serious burden.

Examiner agrees with the arguments in part and regroups the inventions as follows:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-24 and 27-30, drawn to a package for housing optoelectronic device, classified in class 385, subclass 92.

II. Claims 25-27, drawn to an automated process for manufacturing a low-profile package, classified in class 438, subclass 106.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as coating, adhesive bonding, soldering, brazing, or dicing.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Since applicant has elected Group I (claims 1-18) in response filed June 07, 2006, the regrouped invention of Group I (claims 1-24 and 27-30) has been constructively elected for prosecution on the merits. Accordingly, claims 25-26 withdrawn from consideration as being directed to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-7, 9, 12-14, and 16-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilliland et al (US 6,349,105).

Gilliland et al discloses a small format optoelectronic package comprising (Fig. 14):

an insulating base (440) having an upper surface, wherein optoelectronic devices (470,480) are mounted to the upper surface of the insulating base;

a metal member (conductive plating of region 441, see lines 31-33 of column 9) having a top wall and a bottom wall, wherein the bottom wall of the metal member is attached to the upper surface of the insulating base; and

a substantially flat metal cover (430) attached to the top wall of the metal member to hermetically seal the metal cover to the insulating base.

As to claim 2, Gilliland et al discloses an integrated circuit mounted adjacent to the optoelectronic device on the upper surface of the insulating base, wherein the integrated circuit is electrically connected to the optoelectronic device (see lines 61-63 of column 9).

As to claim 4, Gilliland et al discloses a first metal layer (490) disposed on the upper surface of the insulating base. See Fig. 14.

As to claim 5, Gilliland et al discloses a second metal layer (conductive traces on 460) disposed on a lower surface of the insulating base, wherein each of the first and second metal layers includes a pattern of conductive paths.

As to claim 7, Gilliland et al inherently discloses an adhesive layer as the metal member is adhered to the insulating base.

As to claim 9, Gilliland et al discloses a multilayer base (440) comprising metal layers located at a plurality of levels of the base and electrically connected together (See Fig. 14 and related description).

As to claim 12, Gilliland et al teaches that the insulating base comprises a ceramic material (see lines 35-37 of column 6).

As to claim 13, Fig. 14 of Gilliland shows the insulating base having a polygonal shape.

As to claim 14, the optoelectronic device of Gilliland et al is located within an inner region of the metal member (See the plating region and the optoelectronic device location in Fig.14).

As to claim 17 Gilliland et al discloses a transparent portion (420) in the substantially flat metal cover.

As to claim 18, it is inherent that the optoelectronic device could be **adapted** operate at a speed of at least 10 Gbps.

As to claims 19-24, the claims method steps are inherent to assemble the package of Gilliland et al described above.

Note, claims limitations are discussed above with reference to Fig. 14 of Gilliland et al, however other embodiments disclosed by Gilliland et al could be applicable to meet the claimed limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 8, 10-11, 15, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland et al.

As to claim 3, Gilliland et al fails to disclose the thickness of metal member ranging from 0.5 mm to approximately 2 mm. As to claim 15, Gilliland et al fails to disclose the metal member having a circular cross-sectional shape or an oval cross-sectional shape.

In lines 10-11 of column 5, Gilliland et al teaches that the thickness of the metal member being 0.003 inches (approximately 0.07 mm). Changing the size and shape of the metal member would be within the reach of ordinary skilled artisan and obvious matter of design choice. Increase in thickness of the metal member certainly increases mechanical strength of the overall package and a circular or oval shape cross-section metal member is readily available and widely known for the sealing members.

From available sealing rings (metal member) in the art, the ordinary artisan would have found it to be obvious matter of design choice at the time of the invention to use the metal member having a thickness in a range of 005 mm to 2 mm and circular or oval shape cross section.

As to claim 8, Gilliland et al fails to disclose the upper adhesive layer including one of a solder perform layer and a brazing material.

Such solder perform and brazing material are well known in the art for adhering two metal devices. Gilliland et al teaches that the metal cover can be attached by a soldering process or a brazing process (see lines 55-56 of column 6).

From collective teachings of Gilliland et al and available well known process, the ordinary artisan would have found it to be obvious at the time of the invention to use a soldering process or a brazing process for adhering the metal member to the insulating base, which is highly desirable in Gilliland et al and efficiently attaches the metal member to the insulating base.

As to claim 10, Gilliland et al fails to disclose a submount attached to the upper surface of the insulating base.

The packaging device to include a submount for mounting optoelectronic devices is well known as illustrated in prior art device (Fig. 8) in Gilliland et al. Depending upon the number of devices and their availability and use of such package in desirable optical communication system, the submount is integrated to the package.

From well-known techniques and shown in Fig. 8 of the prior art device of Gilliland et al, the ordinary artisan would have found it to be obvious at the time of the invention to use a submount for attaching the optoelectronic device in Gilliland et al for the purpose of advantageously assembling package with readily available part and using such package in desired optical communication system.

As to claims 11 and 27, Gilliland et al fails to disclose a heat-dissipating device attached to the insulating base.

The heat-dissipating device is well known in the art to dissipate heat generated by the optoelectronic devices and increase the life of the package.

From available well known techniques, the ordinary artisan would have found it to be obvious at the time of the invention to attach a heat dissipating device to the insulating base of Gilliland et al for the purpose of increasing the life of the package.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 27 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 60 of copending Application No. 11/039,174. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 60 of the copending application is broader in

scope then claim 27 of the instant application. Claim 27 of the instant application includes all the limitations claimed in claim 60 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Richardson et al, Huang et al, and Stark disclose different types of hermetically seal packages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemang Sanghavi whose telephone number is (571) 272-9955. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hemang Sanghavi
Primary Examiner
Art Unit 2874

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